

5 TRANSMITTER HAVING PROGRAMMABLE TRANSMISSION PARAMETERS  
TEMPORALLY ALIGNED WITH PAYLOAD AND METHOD THEREFOR

## Abstract of the Disclosure

10        A software-defined radio (12) includes a  
transmitter (20) having any number of upstream modules  
(30) and any number of downstream modules (34). The  
upstream modules (30) perform signal processing on  
input signals (28), and the downstream modules (34)  
15        provide an RF interface for processed signals (58).  
The upstream modules (30) and downstream modules (34)  
couple to a common intra-transmitter signal transporter  
(32), which may be implemented as a bus. Programmable  
transmission parameters (60) which program the  
20        downstream modules (34) to generate a communication  
signal (18) exhibiting desired attributes such as  
frequency and keying are mingled with the processed  
input signal (58) in upstream modules (30) to preserve  
timing. The programmable transmission parameters (60)  
25        are extracted in downstream modules (34), and applied  
to the communication signal (18) at the timing  
specified by position relative to the processed input  
signal (58).